

SUPPLEMENTARY TABLE 1. International Classification of Diseases, 10th Revision, based Million Hearts 2022 case definition codes by event category and type

Event Category or Type	Emergency Department First-listed ICD-10-CM Codes*	Acute Care Hospitalization Primary ICD-10-CM Codes*	Underlying Cause of Death ICD-10 Codes*
Acute myocardial infarction	—	I21	I21
Stroke			
Acute ischemic cerebral infarction	—	I63	I63
Acute hemorrhagic stroke	—	I60, I61	I60, I61
Acute, but ill-defined, cerebrovascular disease	—	I67.89 [†]	— [§]
Other cerebrovascular disease deaths	—	—	I62, I64, I67, I69
Symptomatic precursor conditions			
Other acute and subacute ischemic heart disease	I20.0 [¶] , I24	I20.0 [¶] , I24	I20.0 [¶] , I24
Stable angina pectoris	I20.1, I20.8, I20.9	I20.1, I20.8, I20.9	I20.1, I20.8, I20.9
Transient ischemic attack	G45.0, G45.1, G45.2, G45.8, G45.9, G46.0, G46.1, G46.2, I67.841, I67.848	G45.0, G45.1, G45.2, G45.8, G45.9, G46.0, G46.1, G46.2, I67.841, I67.848	G45.0, G45.1, G45.2, G45.8, G45.9
Other cardiovascular disease conditions			
Heart failure	[I11.0, I13.0] ^{**} , I50	[I11.0, I13.0] ^{**} , I50	[I11.0, I13.0] ^{††} , I50
Abdominal aortic aneurysms	—	I71.02, I71.3 ^{§§}	I71.3, I71.4 ^{¶¶}
Atheroembolism	—	I75	— ^{***}
Atherosclerosis and peripheral artery disease	—	—	[I70, I73.9 ^{†††}] ^{§§§}
Hypertension without heart failure	—	[I10, I11.9, I12.9, I13.10] ^{**}	[I10, I11.9, I12.9, I13.9] ^{††}
Cardiac arrest	—	I46.2, I46.9 ^{¶¶¶}	I46 ^{¶¶¶}

Abbreviations: ICD-10-CM, *International Classification of Diseases, 10th Revision, Clinical Modification* (non-fatal events); ICD-10, *International Classification of Diseases, 10th Revision* (mortality)

* Excludes all cases involving women with any pregnancy-related ICD-10-CM codes (O00–O9A, Z34, or Z36) or contributing cause of death ICD-10 codes (O00–O99).

[†] ICD-9-CM code 436 only partially maps to ICD-10-CM code I67.89. However, the Centers for Medicare and Medicaid Services plans on using I67.89 for tracking purposes relating to acute stroke patient management, so the code was included. ICD-9-CM code 436 is currently rarely used, as coders now use more appropriate specific cerebrovascular disease codes.

[§] ICD-9-CM code 436 does not accurately map to an ICD-10 mortality code (closest code: I64, which is included as “Other cerebrovascular disease deaths”).

[¶] “Unstable angina” (i.e. intermediate coronary syndrome, ICD-9-CM 411.1) does not map to an I24 ICD-10-CM code, but to I20.0.

^{**} Excludes persons with any chronic kidney disease, stage 5, or end-stage renal disease ICD-10-CM code of N18.5, N18.6, Z49, Z94.0, Z99.2, or Z91.15.

^{††} Excludes persons with any chronic kidney disease, stage 5, ICD-10 contributing cause of death code of N18.5.

^{§§} Includes only acute abdominal aortic dissection and rupture (not asymptomatic or elective admissions for surgery).

^{¶¶} “Abdominal aortic aneurysm without mention of rupture” is included because—although not explicitly mentioned—deaths from abdominal aortic aneurysm almost always occurs as the result of rupture.

^{***} ICD-10 mortality codes for embolism/thrombosis (I74) do not specify the cause of the embolism/thrombosis like ICD-10-CM codes do, therefore they were excluded.

^{†††} “Peripheral vascular disease, unspecified” is included, because it best represents deaths attributable to “peripheral artery disease.”

^{§§§} Only deaths attributable to atherosclerosis or peripheral artery disease were included because Million Hearts 2022 activities will directly impact mortality related to these types of cases, but not necessarily emergency department visits or hospitalizations.

^{¶¶¶} Cardiac arrest events were only included if they had a secondary diagnosis/contributing cause of death described using a Million Hearts 2022 ICD-10-CM or ICD-10 mortality code.